

Listing of Claims:

1. (Currently Amended) A soil compacting system, comprising:

- a mobile, generally hand guided steerable soil compacting device; and
- a control device;

the control device including:

- a surface definition device ~~(6) which~~ allowings an local operator to establish a surface to be compacted by locally defining and associated surface boundaries;
- a position detection device for detecting the current position of the soil compacting device, at least in the vicinity of the surface boundaries;
- a motion controller for changing a direction of travel by predetermining a target value for a traveling movement of the soil compacting device, such that the soil compacting device does not cross the respective surface boundary, but rather continues its travel within the surface, the motion controller changing the direction of travel by adjusting rotation of an off balanced exciter.

2. (Previously Presented) A soil compacting system according to Claim 1, wherein

- the position detection device is fashioned at least for the detection of an approach of the soil compacting device to one of the surface boundaries;
- the direction of travel can be changed by the motion controller if the position detection device determines an approach to the surface boundary.

3. (Previously Presented) A soil compacting system according to Claim 2, wherein the surface definition device has a device for the mechanical, optical, magnetic, inductive, or capacitive identification of the surface boundaries.

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4. (Previously Presented) A soil compacting system according to Claim 3, wherein the surface identification device is for mechanical identification and has a tape or wire that can be stretched along the surface boundaries.

5. (Previously Presented) A soil compacting system according to Claim 3, wherein the surface identification device is for optical identification and has coloring agents that can be applied to the soil along the surface boundaries.

6. (Previously Presented) A soil compacting system according to Claim 3, wherein the surface identification device is for optical identification and has a photoelectric barrier.

7. (Previously Presented) A soil compacting system according to Claim 1, wherein the motion controller effects a change of the direction of travel from the original direction of travel with a predetermined angle () that remains constant during the entire compacting process, or with angles that change during the compacting process and that are selected randomly.

8. (Previously Presented) A soil compacting system according to Claim 1, wherein the control device comprises:

- a path planning device for setting a predetermination for a travel path on the basis of the defined surface in such a way that the soil compacting device travels over the surface to be compacted completely at least once while adhering to the predetermined travel path; wherein
- the position detection device is fashioned for the detection of the current position of the soil compacting device within the surface boundaries, and
- the motion controller is fashioned for the predetermination of a target value for a travel motion of the soil compacting device based on a comparison of the current position with the predetermined travel path, in such a way that the soil compacting device follows the predetermined travel path.

9. (Previously Presented) A soil compacting system according to Claim 8, wherein the surface definition device and/or the position detection device has a coordinate detection device for determining absolute geographical locus coordinates of its location.

10. (Previously Presented) A soil compacting system according to Claim 8, wherein the surface definition device has a memory device containing geographical locus information for the region of the surface that is to be compacted.

11. (Previously Presented) A soil compacting system according to Claim 8, wherein the surface boundaries are capable of being defined by absolute locus coordinates.

12. (Previously Presented) A soil compacting system according to Claim 8, wherein the predetermination of the travel path by the path planning device is capable of being defined in the form of absolute or relative geographical locus coordinates.

13. (Previously Presented) A soil compacting system according to Claim 8, wherein the path planning device has mathematical algorithms for path-optimized and/or time-optimized path planning.

14. (Currently Amended) A soil compacting system according to Claim 8, wherein at least a part of the components of the control device, in particular the surface definition device, the motion controller, and/or the path planning device, is situated spatially separate from the soil compacting device.

15. (Previously Presented) A soil compacting system according to Claim 8, wherein the surface definition device is situated spatially separate from the soil compacting device, and wherein data can be transmitted wirelessly via at least of radio, infrared, or laser between the

surface definition device and the soil compacting device in wireless fashion, in particular via radio, infrared, or laser.

16. (Previously Presented) A soil compacting system according to Claim 1, wherein an input device for manually modifying the target value predetermined by the motion controller is provided spatially separate from the soil compacting device, and is coupled thereto via a radio, laser, or infrared path.

17. (Previously Presented) A soil compacting system according to Claim 1, wherein the position detection device is coupled to a memory device for storing data concerning the positions reached by the soil compacting device.

18. (Previously Presented) A soil compacting system according to Claim 1, wherein an evaluation device is coupled to the surface definition device and to the position detection device, and has a display for the graphic representation of the predetermined surface boundaries and of the surface already compacted at a given time by the soil compacting device.

19. (Previously Presented) A soil compacting system according to Claim 8, wherein

- a compaction result detection device is provided for detecting the actual state of compaction of the compacted soil;
- the compaction result detection device is coupled to the path planning device for the communication of information relating to the actual state of compaction; and
- the path planning device is fashioned for the definition of the predetermination of the travel path, taking into account the actual state of compaction.

20. (Previously Presented) A soil compacting system according to Claim 19, wherein

- the path planning device, the actual state of compaction can be compared with a

predetermined target state of compaction;

- the travel path can be predetermined by the path planning device in such a way that soil surfaces in which the actual state of compaction exceeds the target state of compaction, so that a sufficient compaction is already present, are no longer traveled over by the soil compacting device.

21. (Currently Amended) A soil compacting system according to Claim 1, wherein the soil compacting device comprises:

- a drive mechanism for producing an advance movement;
- a steering device for producing a yaw moment about a vertical axle of the soil compacting device;
- ~~- a movement detection device for detecting an actual value for the travel movement; and~~
- a travel regulation device that can be charged with the an actual travel movement value and the target value predetermined by the motion controller, for controlling the steering device and/or the drive mechanism in such a way that a control deviation formed by the difference between the actual travel movement value and the target value is minimal.

22. (Previously Presented) A soil compacting system according to Claim 21, wherein the drive mechanism has at least one vibration-exciting device having two shafts that are parallel to one another and that can be rotated in opposite directions, each of which bears at least one imbalance mass, and whose phase position to one another can be adjusted.

23. (Previously Presented) A soil compacting system according to Claim 21, wherein on at least one shaft of the vibration-exciting device two imbalance masses are situated so as to be axially offset to one another, and wherein the steering device is fashioned for the adjustment of the phase position of the two imbalance masses.

24. (Previously Presented) A soil compacting system according to Claim 21, wherein the drive mechanism and the steering device are formed by a system of a plurality of vibration-exciting devices that are held stationary relative to one another, the vibration-exciting devices each having two shafts that are parallel to one another and that can be rotated in opposite directions, each shaft bearing at least one imbalance mass, the phase position of the shafts being adjustable, an advance movement being producible in a direction of advance by each of the vibration-exciting devices.

25. (Previously Presented) A soil compacting system according to Claim 21, wherein the direction of advance of at least one of the vibration-exciting devices differs from that of the others.

26. (Previously Presented) A soil compacting system according to Claim 21, wherein a soil contact plate charged by the vibration-exciting device or devices has an essentially circular outline.

27. (Currently Amended) A method for automated soil compacting, comprising the steps of:

- locally defining surface boundaries of a surface to be compacted, using a locally positioned surface definition device;
- automatically travelling a normally hand guided soil compacting device within the surface boundaries, essentially in a generally straight line such that the position of the compacting device relative to a work surface is defined solely by the surface boundary;
- detecting an approach of the soil compacting device to one of the surface boundaries; and
- automatically modifying of the direction of travel of the soil compacting device from the

generally straight line in such a way that the soil compacting device does not cross the respective surface boundary, but rather continues its travel within the surface in a direction crossing the generally straight line.

28. (Currently Amended) A method for automated soil compacting, comprising the steps of:

- locally defining surface boundaries of a surface to be compacted by physically defining a perimeter of the surface to be compacted, and storing data representing the surface boundaries in a surface definition device;
- planning a predetermination for a travel path in such a way that a normally hand guided soil compacting device automatically travels completely over the surface to be compacted at least once, while adhering to the predetermined travel path;
- automatically travelling of the soil compacting device along the predetermined travel path after the surface boundaries have been defined.

29. (Previously Presented) A method according to Claim 28, wherein the automatic travelling step comprises the following steps:

- detecting the current position of the soil compacting device;
- comparing the current position with the predetermined travel path; and
- automatically travelling and steering the soil compacting device in such a way that the soil compacting device follows the predetermined travel path.

30. (Previously Presented) A method according to Claim 29, further comprising:

- continuously detecting the actual state of compaction of the compacted soil;
- comparing the actual state of compaction with a target state of compaction;
- compensating the predetermined travel path in such a way that areas of the soil in which the

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actual state of compaction is greater than the target state of compaction are no longer traveled over by the soil compacting device.